

A clean solution



Product description

With its flush-mounted stainless steel membranes and large range of hygienic process connectors, the PHT pressure transmitter is ideal for demanding hygienic applications in the food and beverage, pharmaceutical and cosmetics industries. With enhanced

process temperatures, resistance to corrosive fluids, cavity-free design with hygienically-graded process connectors, the PHT is distinguished by its outstanding functionality and certifications issued by EHEDG and 3-A Sanitary Standards, Inc.

At a glance

- Robust and precise pressure measurement technology
- Flush-mounted, hermetically sealed stainless steel membrane with roughness Ra < 0.4 µm
- Wetted parts stainless steel 1.4435, housing stainless steel 1.4571
- CIP/SIP resistant
- Large range of hygienic process connectors
- Stainless steel housing with enclosure rating of up to IP 68
- Field housing available (IP 67)

Your benefits

- Perfectly suited for demanding hygienic applications in the food and beverage, pharmaceutical and cosmetics industries
- Safe hygienic operation through EHEDG and 3-A certifications
- High reliability due to robust design and use of high-grade materials
- Withstands CIP/SIP, ensuring high system availability and reliability
- Transmitter housing is easily cleaned
- Versatile configurability optimizes solutions



Additional information

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→ [www.mysick.com/en/PHT](http://www.mysick.com/en/PHT)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



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Detailed technical data

Features

<b>Pressure units</b>	bar, MPa, psi and kg/cm <sup>2</sup>
<b>Measuring ranges</b>	
Gauge pressure	0 bar ... 0.25 bar up to 0 bar ... 25 bar
Absolute pressure	0 bar ... 0.25 bar up to 0 bar ... 16 bar
Compound pressure	-1 bar ... 0 bar up to -1 bar ... +15 bar
<b>Process temperature</b>	-20 °C ... +150 °C
<b>Signal output and maximum ohmic load R<sub>A</sub></b>	4 mA ... 20 mA, 2-wire (R <sub>A</sub> ≤ (L <sup>+</sup> - 10 V) / 0.02 A [Ohm]) The variant with field housing and current output 4 mA ... 20 mA features test terminals that allow metering of the signal current without having to disconnect the device. 0 V ... 10 V, 3-wire (R <sub>A</sub> > 10 kOhm) 0 V ... 5 V, 3-wire (R <sub>A</sub> > 5 kOhm)
<b>Zero and span adjustment</b>	± 5 % using potentiometer inside the instrument

Performance

<b>Non-linearity</b>	≤ ± 0.2 %
<b>Accuracy</b>	≤ ± 0.5 % of span Optional ≤ ± 0.25 % of span (adjusted in vertical mounting position with lower pressure connection)
<b>Non-repeatability</b>	≤ ± 0.1 % of span
<b>Response time (10 % ... 90 %)</b>	≤ 10 ms
<b>Long-term drift/one-year stability</b>	≤ 0.2 % of span
<b>Temperature coefficient in rated temperature range</b>	Mean TC of zero: ≤ 0.2 % of span/ 10 K, with pressure ranges 0 bar ... 0.6 bar to 0 bar ... 25 bar ≤ 0.25 % of span/ 10 K, with pressure range 0 bar ... 0.4 bar ≤ 0.4 % of span/ 10 K with pressure range 0 bar ... 0.25 bar Mean TC of span ≤ 0.2 % of span / 10 K
<b>Rated temperature range</b>	0 °C ... +80 °C

Mechanics/electronics

<b>Process connections</b>	See type code
<b>Wetted parts</b>	Stainless steel 1.4435
<b>Internal transmission fluid</b>	Synthetic oil, FDA approved
<b>Housing material</b>	Stainless steel 1.4571
<b>Electrical connection/enclosure rating <sup>1)</sup></b>	Round connector M12 x 1, 4-pin, IP 67 L-connector (DIN EN 175301-803 A), IP 65 Field housing IP 67 Flying leads, 1.5 m, IP 68 (zero and span not adjustable) Flying leads, 3 m, IP 68 (zero and span not adjustable)
<b>Supply voltage</b>	10 V DC ... 30 V DC 14 V DC ... 30 V DC with output signal 0 V ... 10 V 11 V DC ... 30 V DC with output signal 4 mA ... 20 mA and field housing
<b>Electrical safety</b>	Overvoltage protection: 36 V DC Short-circuit protection: Q <sub>A</sub> towards M Reverse polarity protection: L <sup>+</sup> towards M Protection class: III

<sup>1)</sup> Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding enclosure rating.



<b>Dielectric strength</b>	500 V DC NEC Class 02 power supply (low voltage and low current max. 100 VA even under fault conditions)
<b>CE-conformity</b>	EMC directive: 2004/108/EEC, EN 61326-2-3
<b>Weight sensor</b>	Approx. 500 g

<sup>1)</sup> Enclosure rating IP per IEC 60529. The enclosure rating classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding enclosure rating.

### Ambient data

<b>Ambient temperature</b>	-20 °C ... +80 °C
<b>Storage temperature</b>	-40 °C... +100 °C
<b>Shock load</b>	500 g according to IEC 60068-2-27 (mechanical shock)
<b>Vibration load</b>	15 g per IEC 60068-2-6 (vibration under resonance)

### Ordering information

The part numbers below show a selection of our common configurations and represent only a portion of the product portfolio. The type code on page D-148 indicates possible configurations that can be ordered.

#### Gauge pressure

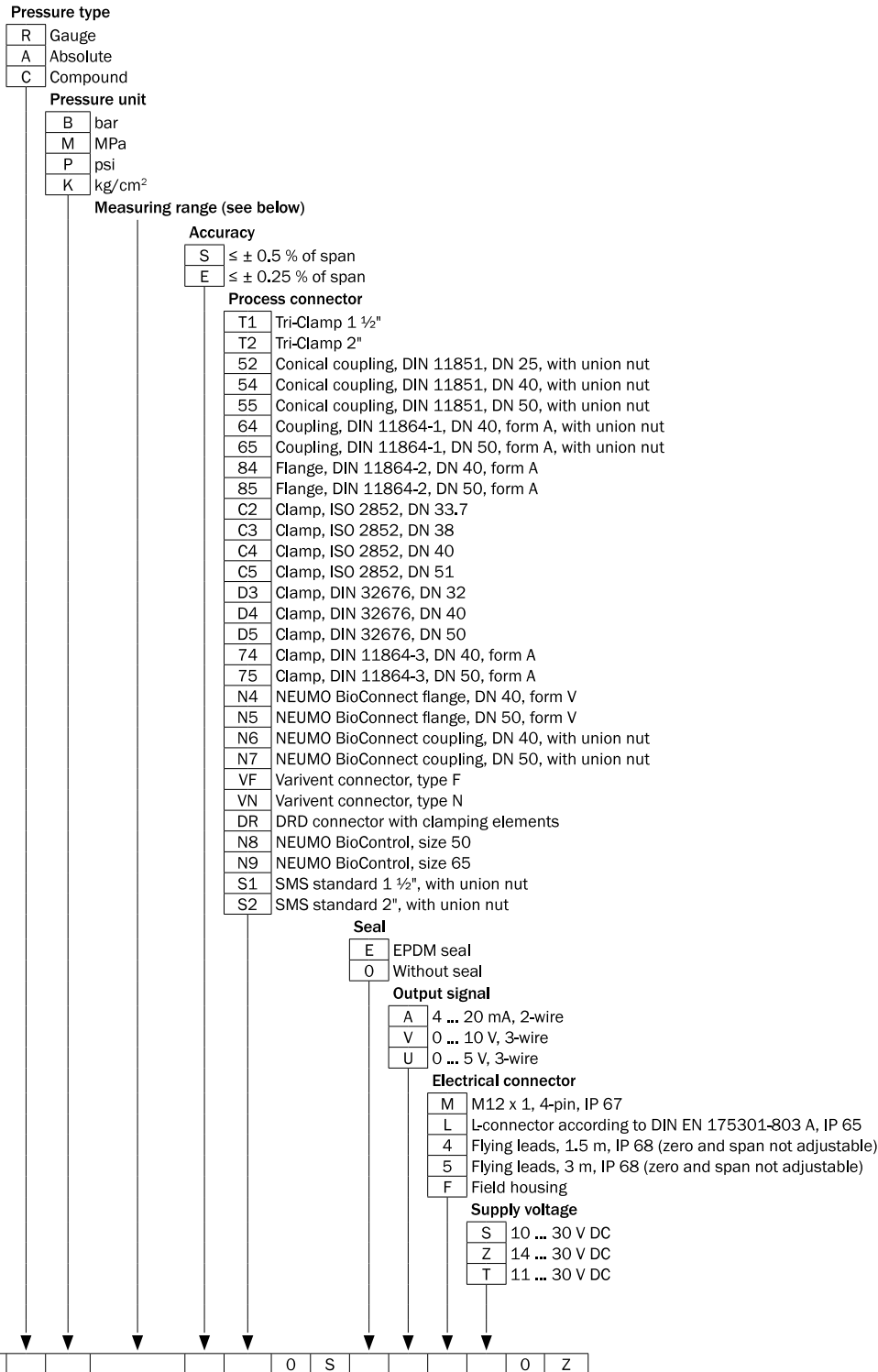
- **Output signal:** 4 mA ... 20 mA
- **Accuracy:**  $\leq \pm 0.5$  % of span
- **Seal:** Without seal

Electrical connection	Process connection	Measuring range	Model name	Part no.
Round connector M12 x 1, 4-pin, IP 67	Varivent Connector Type F	0 bar ... 25 bar	PHT-RB025SVF0S0AMS0Z	6039346
		0 bar ... 10 bar	PHT-RB010SVF0S0AMS0Z	6039345
		0 bar ... 6 bar	PHT-RB6X0SVF0S0AMS0Z	6039344
		0 bar ... 2.5 bar	PHT-RB2X5SVF0S0AMS0Z	6039343
		0 bar ... 1 bar	PHT-RB1X0SVF0S0AMS0Z	6039342
		0 bar ... 0.25 bar	PHT-RBX25SVF0S0AMS0Z	6039340
	Tri-Clamp 1 1/2"	0 bar ... 25 bar	PHT-RB025ST10S0AMS0Z	6039297
		0 bar ... 10 bar	PHT-RB010ST10S0AMS0Z	6039296
		0 bar ... 6 bar	PHT-RB6X0ST10S0AMS0Z	6039295
		0 bar ... 2.5 bar	PHT-RB2X5ST10S0AMS0Z	6039294
		0 bar ... 1 bar	PHT-RB1X0ST10S0AMS0Z	6039293
		0 bar ... 0.25 bar	PHT-RBX25ST10S0AMS0Z	6039291
	Conical coupling (DIN 11851) DN 40 with union nut	0 bar ... 25 bar	PHT-RB025S540S0AMS0Z	6039318
		0 bar ... 10 bar	PHT-RB010S540S0AMS0Z	6039317
		0 bar ... 6 bar	PHT-RB6X0S540S0AMS0Z	6039316
		0 bar ... 2.5 bar	PHT-RB2X5S540S0AMS0Z	6039315
		0 bar ... 1 bar	PHT-RB1X0S540S0AMS0Z	6039314
		0 bar ... 0.25 bar	PHT-RBX25S540S0AMS0Z	6039312

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Electrical connection	Process connection	Measuring range	Model name	Part no.
Field housing IP 67	Varivent Connector Type F	0 bar ... 25 bar	PHT-RB025SVF0S0AFT0Z	6039458
		0 bar ... 10 bar	PHT-RB010SVF0S0AFT0Z	6039457
		0 bar ... 6 bar	PHT-RB6X0SVF0S0AFT0Z	6039456
		0 bar ... 2.5 bar	PHT-RB2X5SVF0S0AFT0Z	6039455
		0 bar ... 1 bar	PHT-RB1X0SVF0S0AFT0Z	6039454
		0 bar ... 0.25 bar	PHT-RBX25SVF0S0AFT0Z	6039452
	Tri-Clamp 1 ½"	0 bar ... 25 bar	PHT-RB025ST10S0AFT0Z	6039409
		0 bar ... 10 bar	PHT-RB010ST10S0AFT0Z	6039408
		0 bar ... 6 bar	PHT-RB6X0ST10S0AFT0Z	6039407
		0 bar ... 2.5 bar	PHT-RB2X5ST10S0AFT0Z	6039406
		0 bar ... 1 bar	PHT-RB1X0ST10S0AFT0Z	6039405
		0 bar ... 0.25 bar	PHT-RBX25ST10S0AFT0Z	6039403
	Conical coupling (DIN 11851) DN 40 with union nut	0 bar ... 25 bar	PHT-RB025S540S0AFT0Z	6039430
		0 bar ... 10 bar	PHT-RB010S540S0AFT0Z	6039429
		0 bar ... 6 bar	PHT-RB6X0S540S0AFT0Z	6039428
		0 bar ... 2.5 bar	PHT-RB2X5S540S0AFT0Z	6039427
		0 bar ... 1 bar	PHT-RB1X0S540S0AFT0Z	6039426
		0 bar ... 0.25 bar	PHT-RBX25S540S0AFT0Z	6039424

Type code



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Not all variations of the type code can be combined! Not all available variations are shown.

Measuring ranges

	Gauge pressure	Overpressure safety
X25	0 ... 0,25 bar	2 bar
X40	0 ... 0,4 bar	2 bar
X60	0 ... 0,6 bar	4 bar
1X0	0 ... 1 bar	5 bar
1X6	0 ... 1,6 bar	10 bar
2X5	0 ... 2,5 bar	10 bar
4X0	0 ... 4 bar	17bar
6X0	0 ... 6 bar	35 bar
010	0 ... 10 bar	35 bar
016	0 ... 16 bar	80 bar
025	0 ... 25 bar	80 bar

	Absolute pressure	Overpressure safety
X25	0 ... 0,25 bar abs	2 bar abs
X40	0 ... 0,4 bar abs	2 bar abs
1X0	0 ... 1 bar abs	5 bar abs
1X6	0 ... 1,6 bar abs	10 bar abs
2X5	0 ... 2,5 bar abs	10 bar abs
4X0	0 ... 4 bar abs	17 bar abs
6X0	0 ... 6 bar abs	35 bar abs
010	0 ... 10 bar abs	35 bar abs
016	0 ... 16 bar abs	80 bar abs

	Compound pressure	Overpressure safety
1X0	-1 ... 0 bar	5 bar
1X6	-1 ... +0,6 bar	10 bar
4X0	-1 ... +3 bar	17 bar
6X0	-1 ... +5 bar	35 bar
010	-1 ... +9 bar	35 bar
016	-1 ... +15 bar	80 bar

	Gauge pressure	Overpressure safety
5X0	0 ... 5 psi	29 psi
010	0 ... 10 psi	29 psi
030	0 ... 30 psi	145 psi
060	0 ... 60 psi	246 psi
100	0 ... 100 psi	500 psi
160	0 ... 160 psi	500 psi
200	0 ... 200 psi	1,160 psi
300	0 ... 300 psi	1,160 psi

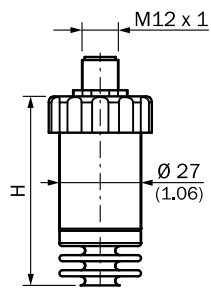
	Absolute pressure	Overpressure safety
015	0 ... 15 psi abs	72,5 psi abs
025	0 ... 25 psi abs	145 psi abs
050	0 ... 50 psi abs	240 psi abs
100	0 ... 100 psi abs	500 psi abs
250	0 ... 250 psi abs	1,160 psi abs

	Compound pressure	Overpressure safety
015	-14,5... 0 psi	72,5 psi

Dimensional drawings

dimensions in mm (inch)

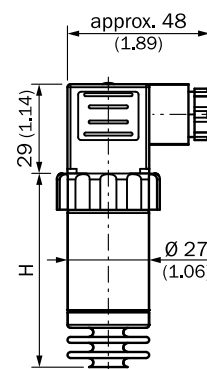
Housing with circular connector M12 x 1, IP 67



With accuracy H

0.5 %	64 (2,52)
0.25 %	84 (3,31)

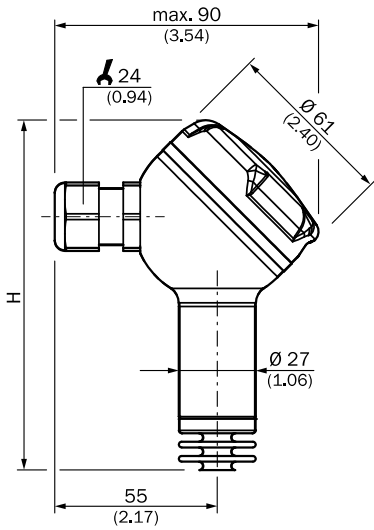
Housing with L-connector (DIN 175301-803 A), IP 65



With accuracy H

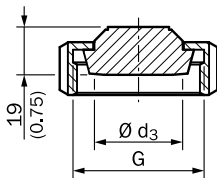
0.5 %	64 (2,52)
0.25 %	84 (3,31)

**Stainless steel field housing, ground terminals, brass nickel-coated, IP 67**



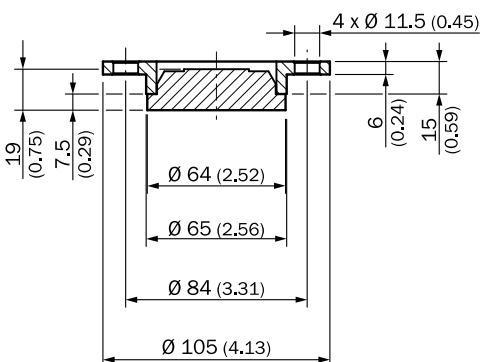
With accuracy	H
0.5 %	123 (4.84)
0.25 %	138.5 (5.45)

**Conical coupling (DIN 11851) with union nut**

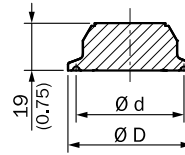


Design	G	Ø d <sub>3</sub>
DIN 11851 DN 25	Rd 52 x 1/6	44 (1.73)
DN 40	Rd 65 x 1/6	48 (1.89)
DN 50	Rd 78 x 1/6	61 (2.40)

**DRD connector with clamping elements**

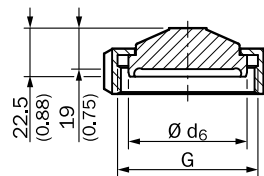


**Clamp**



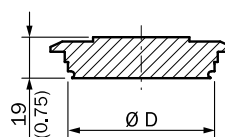
Design	Ø D	Ø d
Tri-Clamp	1 1/2"	50 (1.97) 43.5 (1.71)
	2"	64 (2.52) 56.6 (2.23)
DIN 32676	DN 32	50 (1.97) 43.5 (1.71)
	DN 40	50 (1.97) 43.5 (1.71)
	DN 50	64 (2.52) 56.6 (2.23)
ISO 2852	DN 33.7	50 (1.97) 43.5 (1.71)
	DN 38	50 (1.97) 43.5 (1.71)
	DN 40	64 (2.52) 56.6 (2.23)
	DN 51	64 (2.52) 56.6 (2.23)

**Coupling (DIN 11864-1) form A with union nut**



Design	G	Ø d <sub>6</sub>
DIN 11864-1 DN 40	Rd 65 x 1/6	54.9 (2.16)
DN 50	Rd 78 x 1/6	66.9 (2.63)

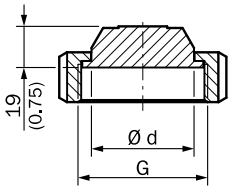
**Varivent connector**



Design	Ø D
VARIVENT® Form F	50 (1.97)
Form N	68 (2.68)

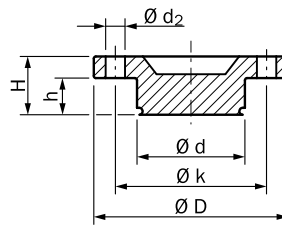
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**SMS standard with union nut**



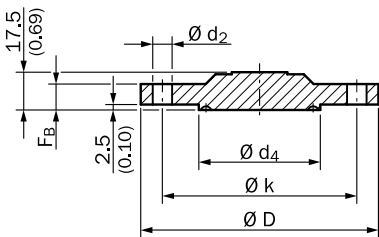
Design	G	Ø d
SMS	1 1/2" Rd 60 x 1/6	47.5 (1.87)
	2" Rd 70 x 1/6	60 (2.36)

**NEUMO BioControl**



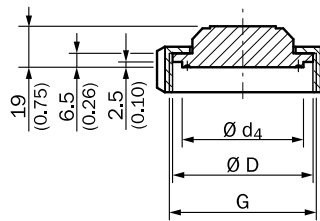
Design	Ø d	Ø d <sub>2</sub>	Ø D	Ø k	h	H
BioControl® Size 50	50 (1.97)	4 x 9 (0.16 x 0.35)	90 (3.54)	70 (2.76)	17 (0.67)	27 (1.06)
Size 65	68 (2.68)	4 x 11 (0.16 x 0.43)	120 (4.72)	95 (3.74)	17 (0.67)	27 (1.06)

**NEUMO BioConnect flange form V**



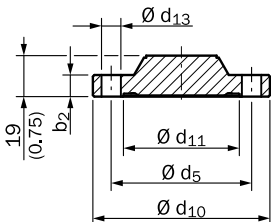
Design	Ø d <sub>2</sub>	Ø d <sub>4</sub>	Ø D	Ø k	Ø F <sub>B</sub>
BioConnect® DN 40	4 x 9 (0.16 x 0.35)	44.2 (1.74)	100 (3.94)	80 (3.15)	10 (0.39)
DN 50	4 x 9 (0.16 x 0.35)	56.2 (2.21)	110 (4.33)	90 (3.54)	12 (0.47)

**NEUMO BioConnect coupling with union nut**



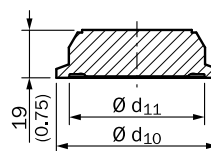
Design	G	Ø d <sub>4</sub>	Ø D
BioConnect® DN 40	M56 x 2	44.2 (1.74)	53 (2.09)
DN 50	M68 x 2	56.2 (2.21)	65 (2.56)

**Flange (DIN 11864-2) form A**



Design	Ø d <sub>5</sub>	Ø d <sub>10</sub>	Ø d <sub>11</sub>	Ø d <sub>13</sub>	Ø b <sub>2</sub>
DIN 11864-2 DN 40	65 (2.56)	82 (3.23)	53.7 (2.11)	4 x 9 (0.16 x 0.35)	10 (0.39)
DN 50	77 (3.03)	94 (3.70)	65.7 (2.59)	4 x 9 (0.16 x 0.35)	10 (0.39)

**Clamp (DIN 11864-3) form A**



Design	Ø d <sub>10</sub>	Ø d <sub>11</sub>
DIN 11864-3 DN 40	64 (2.52)	53.7 (2.11)
DN 50	77.5 (3.05)	65.7 (2.59)

